GSM Pager3

INSTALLATION AND USER MANUAL

for module version v2.12 and higher
Rev. 1.4 04.06.2010

Table of contents

1 Main functions of GSM Pager 3 3
2 Installer settings 3
2.1 Setting parameters through USB serial connection 3
2.2 Setting parameters through modem connection 4
2.3 Module status monitoring 4
2.4 Setting parameters 6
2.5 Customization of parameters 6
2.5.1 Zone settings 6
2.5.2 Event settings 7
2.5.3 Relay output settings 8
2.5.4 Phone number settings 9
2.5.4.1 Setting phone numbers through SMS 10
2.5.5 Alarm settings 11
2.6 Changing the module's password 12
2.7 Event log 13
2.8 Reading the module's version 14
2.9 Remote control and status query through phone 14
2.10 Remote control and status query through SMS 15
2.11 Supply voltage monitoring 16
3 External elements and functions 17
3.1 SIM card case 17
3.2 LED signals 17
3.3 Wiring 17
4 Installation guide 18
4.1 Mounting 18
4.2 Putting into operation 18
5 Technical details 19
5.1 Technical specification 19
5.2 Contents of the package 19
5.3 The manufacturer's contact 19

1 Main functions of GSM Pager 3

Possibility of using as alarm control panel accessory, GSM transmitter, or as a 4 zone GSM control panel armed/disarmed independently.

Further functions:

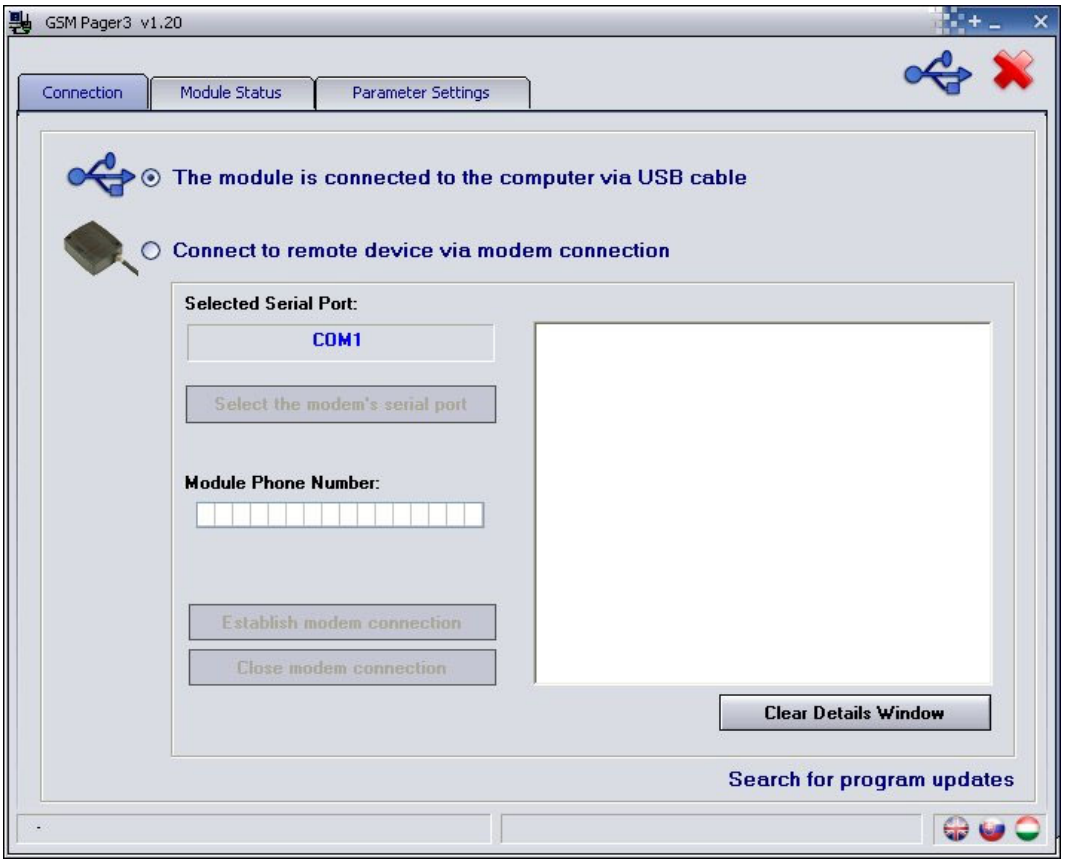
- Sending SMS with adjustable message for each event
- Reports events and restorations in SMS, voice call to users and monitoring station
- Arming / disarming, status query and relay control through phone call

2 Installer settings

Settings can be edited using the "**Pager3 GSM Prog**" software. The desired program language can be selected using the flag icons in the lower right corner of the software window. If necessary, the version of the programming software can be updated by clicking on the "***Search for program updates***" link on the "**Connection**" page. The update procedure requires internet connection. It can be also set here, if the program should search for updates automatically on each opening, or this is performed manually by clicking on the search link.

2.1 Setting parameters through USB serial connection

- Start the „ **Pager3 GSM Prog**" software and select **Connection** page
- Select the option of connecting the module via USB cable
- Power up the module
- Connect the USB cable in case you have not connected the module to PC yet
- As soon as the program has recognized the USB port used by the module, it will request the module password, establish connection and then a green tick icon appears next to the USB icon in the upper right corner of the main window, then the module version is displayed. (The program does not request the module password if the default password is set in the module: **1111**)
- Thereafter settings, module status monitoring etc. become available
- When configuration of the settings is finished, disconnect the module from USB



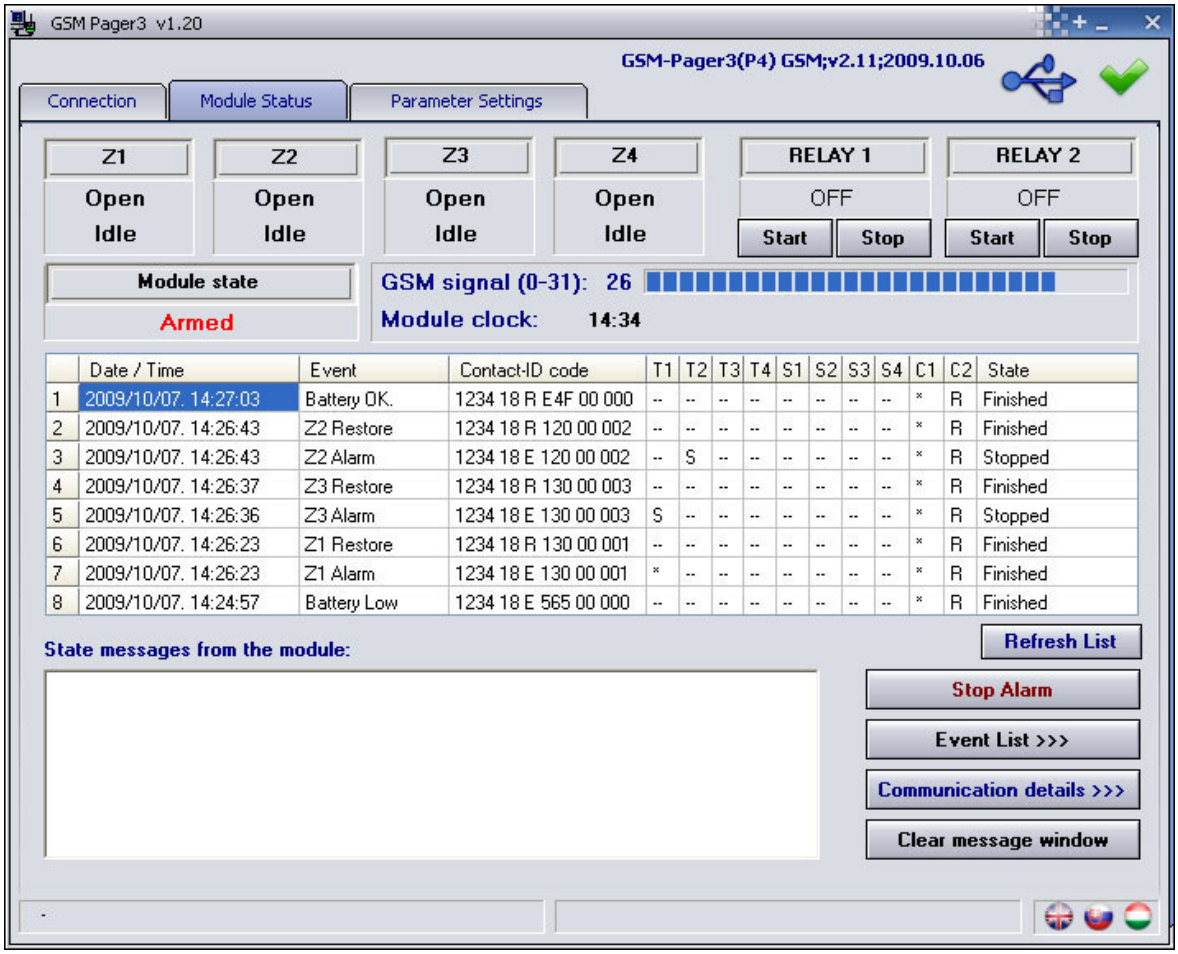
2.2 Setting parameters through modem connection

For this a GSM modem is required (TELL GT64 recommended). GSM data call (CSD) service must be activated on the SIM cards placed in the modem and in the module.

- Start the „ **Pager3 GSM Prog**” software and select **Connection** page
- Select the option of connecting the module via modem connection
- Select the port where you have connected the modem
- Enter the phone number of the SIM card placed in the Pager3 module
- Press „**Establish modem connection**” button
- As soon as the program has connected to the module, it will request the module password, establish connection and then a green tick icon appears next to the USB icon in the upper right corner of the main window, then the module version is displayed. (The program does not request the module password if the default password is set in the module: **1111**)
- When configuration of the settings is finished, close the connection by pressing the “**Close modem connection**” button.

2.3 Module status monitoring

To monitor the module, select “**Module status**” tab.


GSM Pager3 v1.20
GSM-Pager3(P4) GSM;v2.11;2009.10.06
Connection
Module Status
Parameter Settings
Z1
Open
Idle
Z2
Open
Idle
Z3
Open
Idle
Z4
Open
Idle
RELAY 1
OFF
Start
Stop
RELAY 2
OFF
Start
Stop
Module state
Armed
GSM signal (0-31): 26
Module clock: 14:34
Date / Time | Event | Contact-ID code | T1 | T2 | T3 | T4 | S1 | S2 | S3 | S4 | C1 | C2 | State
1 | 2009/10/07. 14:27:03 | Battery OK. | 1234 18 R E4F 00 000 | -- | -- | -- | -- | -- | -- | -- | -- | * | R | Finished
2 | 2009/10/07. 14:26:43 | Z2 Restore | 1234 18 R 120 00 002 | -- | -- | -- | -- | -- | -- | -- | -- | * | R | Finished
3 | 2009/10/07. 14:26:43 | Z2 Alarm | 1234 18 E 120 00 002 | -- | S | -- | -- | -- | -- | -- | -- | * | R | Stopped
4 | 2009/10/07. 14:26:37 | Z3 Restore | 1234 18 R 130 00 003 | -- | -- | -- | -- | -- | -- | -- | -- | * | R | Finished
5 | 2009/10/07. 14:26:36 | Z3 Alarm | 1234 18 E 130 00 003 | S | -- | -- | -- | -- | -- | -- | -- | * | R | Stopped
6 | 2009/10/07. 14:26:23 | Z1 Restore | 1234 18 R 130 00 001 | -- | -- | -- | -- | -- | -- | -- | -- | * | R | Finished
7 | 2009/10/07. 14:26:23 | Z1 Alarm | 1234 18 E 130 00 001 | * | -- | -- | -- | -- | -- | -- | -- | * | R | Finished
8 | 2009/10/07. 14:24:57 | Battery Low | 1234 18 E 565 00 000 | -- | -- | -- | -- | -- | -- | -- | -- | * | R | Finished
State messages from the module:
Refresh List
Stop Alarm
Event List >>>
Communication details >>>
Clear message window

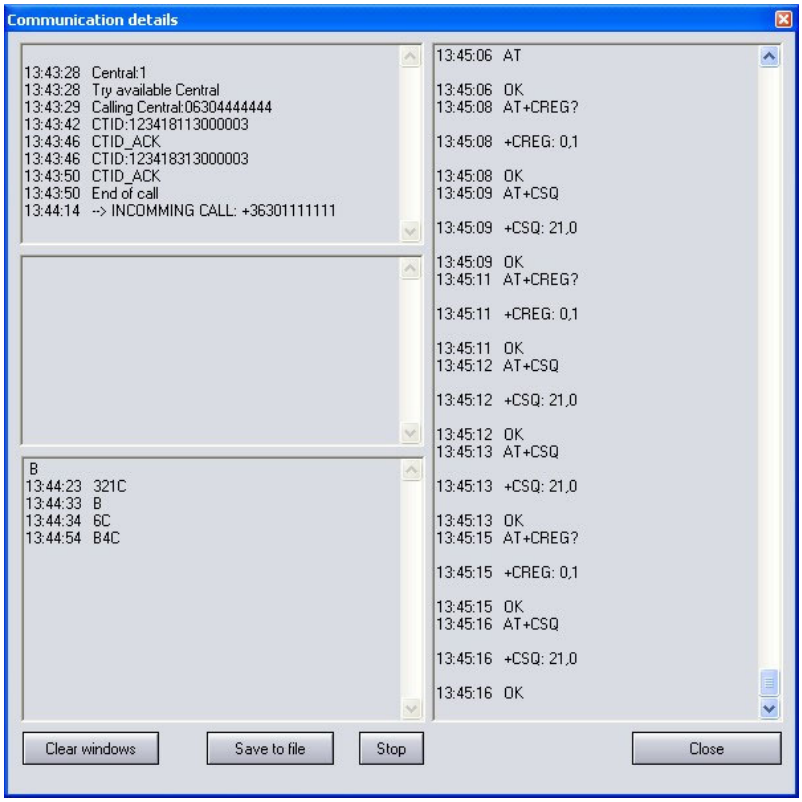
- **Z1, Z2, Z3 and Z4**: the current state of the four inputs is displayed here: opened or closed, respectively if this is default state or not (depending on the setting).
- **RELAY 1** and **RELAY 2:** the current state of relay outputs is displayed here. Activation of relays can be performed using „**Start**” buttons (relays remain activated for the period adjusted at relay settings), then active state will restore, or can be immediately restored by pressing „**Stop**” buttons.
- **GSM signal**: exact value of GSM signal strength (and graphic level display)
- **Module clock**: the current time of the module clock is displayed here
- **Module state**: displays the current state (armed or disarmed)

- **Columns of the event table**:
  - **Date / Time**: date and time of the event
  - **Event**: event specification
  - **CID**: Contact-ID code of the event
  - **T1-T4**: reports to user phone numbers via voice call
  - **S1-S4**: SMS messages to user phone numbers
  - **C1-C2**: reports to monitoring station
  - **State**: event status (Processing, Delayed, Stopped, Finished, Timeout)

  Marks displayed in T1-T4, S1-S4 and C1-C2 columns:
  - **?** - report processing in progress
  - ***** - reporting successful
  - **R** - reporting already performed in other way, therefore reporting is not needed
  - **!** - reporting failed
  - **S** - alarm has been cancelled, therefore reporting is not necessary
  - **T** - reporting timeout, reporting was unsuccessful during the alarming time

  By keeping the mouse pointer above any cell of the table, details of the specific event will be displayed. If you wish to copy this content, hold down CTRL button on keyboard and the details will remain displayed therefore the content can be selected and copied as usual.

- **Refresh List**: the event list can be refreshed at anytime with this button, however the list is automatically refreshed after each new event
- **Stop Alarm**: reports being in progress can be stopped with this button
- **Event List >>>**: opens a detailed report of module events
- In "**State messages from the module**" field recent messages of the module with time of occurrence can be traced. The message window can be cleared with "**Clear message window**" button.
- **Communication details>>>**: pressing this button opens a window showing detailed information about the procedures running in the module (only for troubleshooting)

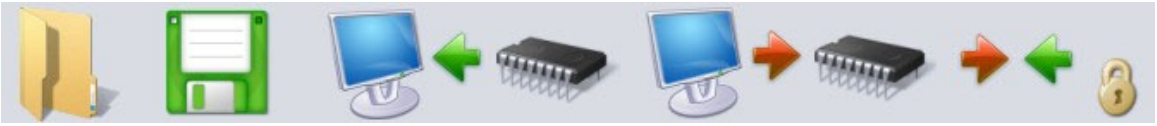


- Message flow can be started and stopped by pressing **Start**/**Stop** button
- Messages can be saved to text file using the "**Save to File**" button

2.4 Setting parameters

To configure the settings select „**Parameter settings**" tab.

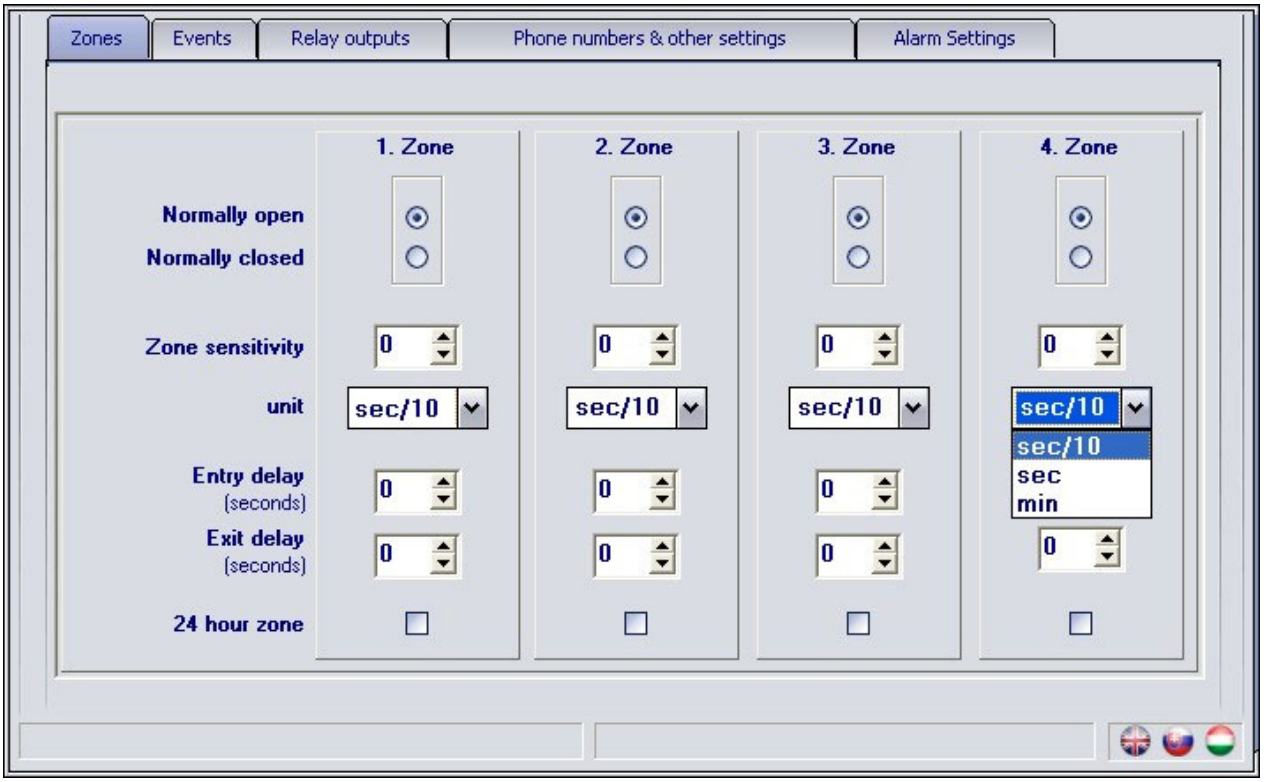
Functions of the upper 6 icons, respectively from left to right : **Read data from file**, **Save data to file**, **Read data from module**, **Write data to module**, **Compare parameters with module settings** and **Change password**. With these simple functions you can easily save, load and archive the settings of the given module.



2.5 Customization of parameters

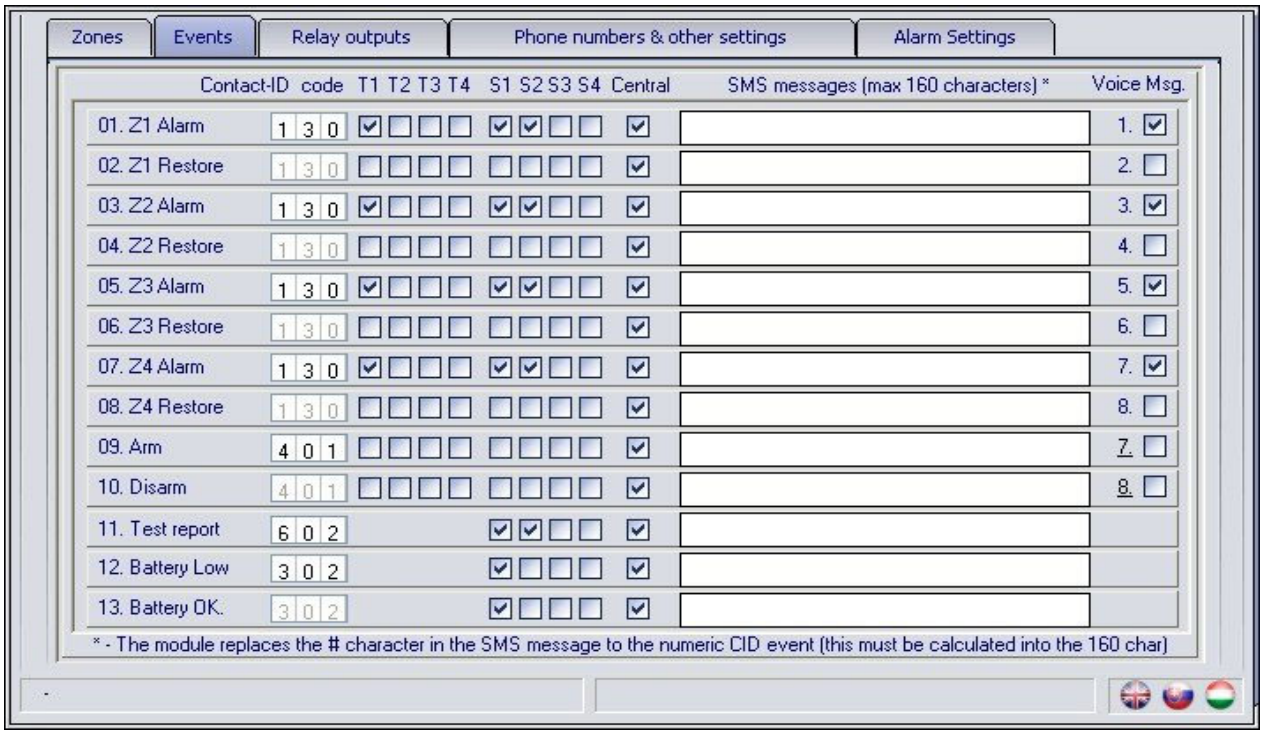
After selecting the „**Parameter Settings**" tab, zones, events, relay outputs, phone numbers and other parameters can be set according to the instructions in the following chapters.

2.5.1 Zone settings



Normally Open / Normally Close: the active state of the zones can be set here
Normally Open: the input should be connected to „V-„ terminal to generate an event
Normally Close: the input should be connected by default to „V-„ terminal and then interrupted to generate an event.
Zone sensitivity: value selectable in tenth seconds, seconds or minutes, (0-254). Shorter state changes on zone inputs are ignored by the module.
Entry delay (value in seconds, 0-254):
This is the time available to disarm the module after violating the given zone. If disarming is not performed till expiration, the alarm process starts.
Exit delay (value in seconds, 0-254):
This is the period of time for which the module still ignores state changes of the given zone after arming the system. (The period available for leaving the given zone).
24 hour zone: change of zone state is transmitted by the module even if disarmed

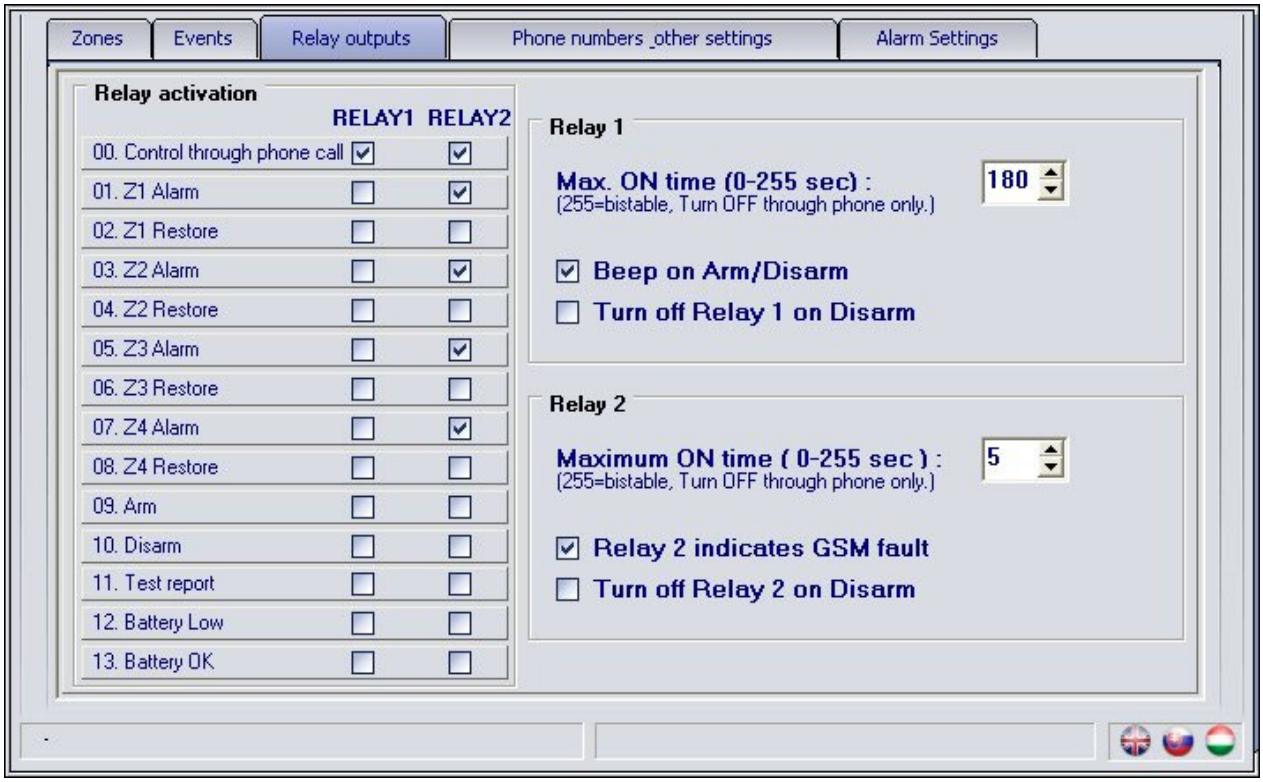
2.5.2 Event settings


Zones
Events
Relay outputs
Phone numbers & other settings
Alarm Settings
Contact-ID code T1 T2 T3 T4 S1 S2 S3 S4 Central SMS messages (max 160 characters) * Voice Msg.
01. Z1 Alarm 130 1.
02. Z1 Restore 130 2.
03. Z2 Alarm 130 3.
04. Z2 Restore 130 4.
05. Z3 Alarm 130 5.
06. Z3 Restore 130 6.
07. Z4 Alarm 130 7.
08. Z4 Restore 130 8.
09. Arm 401 7.
10. Disarm 401 8.
11. Test report 602
12. Battery Low 302
13. Battery OK. 302
* - The module replaces the # character in the SMS message to the numeric CID event (this must be calculated into the 160 char)

- **Contact-ID code**: event code of 3 digits containing 0..9,A,B,C,D,E,F characters for reporting to monitoring station. (e.g. 130 = alarm, however this code is also used for restoration, since the module will indicate automatically in the appropriate part of the Contact-ID report whether it is a new event or restoration).
- **T1-T4**: if enabled, the given event will be reported through voice call to 1-4. user phone numbers.
- **S1-S4**: if enabled, the given event will be reported through SMS message to 1-4. user phone numbers.
- **Central**: If enabled, the given event will be reported to monitoring station.
- **SMS message**: enter the message for the SMS that will be sent when the event occurs. By using the **#** character in the SMS message, the module will substitute this character with the complete Contact-ID message. The maximum 160 characters include this substitution as well.
- **Voice Msg.**: it can be enabled to play the appropriate recorded voice message (ordinal number displayed here) in the call initiated when the given event occurs. (First siren tone is played for 3 seconds, then the 8 seconds long voice message is repeated).
  If disabled, only siren tone will be played in voice calls.

  “Test report”, “battery low” and “battery OK” events can only be notified in SMS and/or to monitoring station.

2.5.3 Relay output settings



Control through phone call: if enabled, the relays become controllable remotely through phone call.

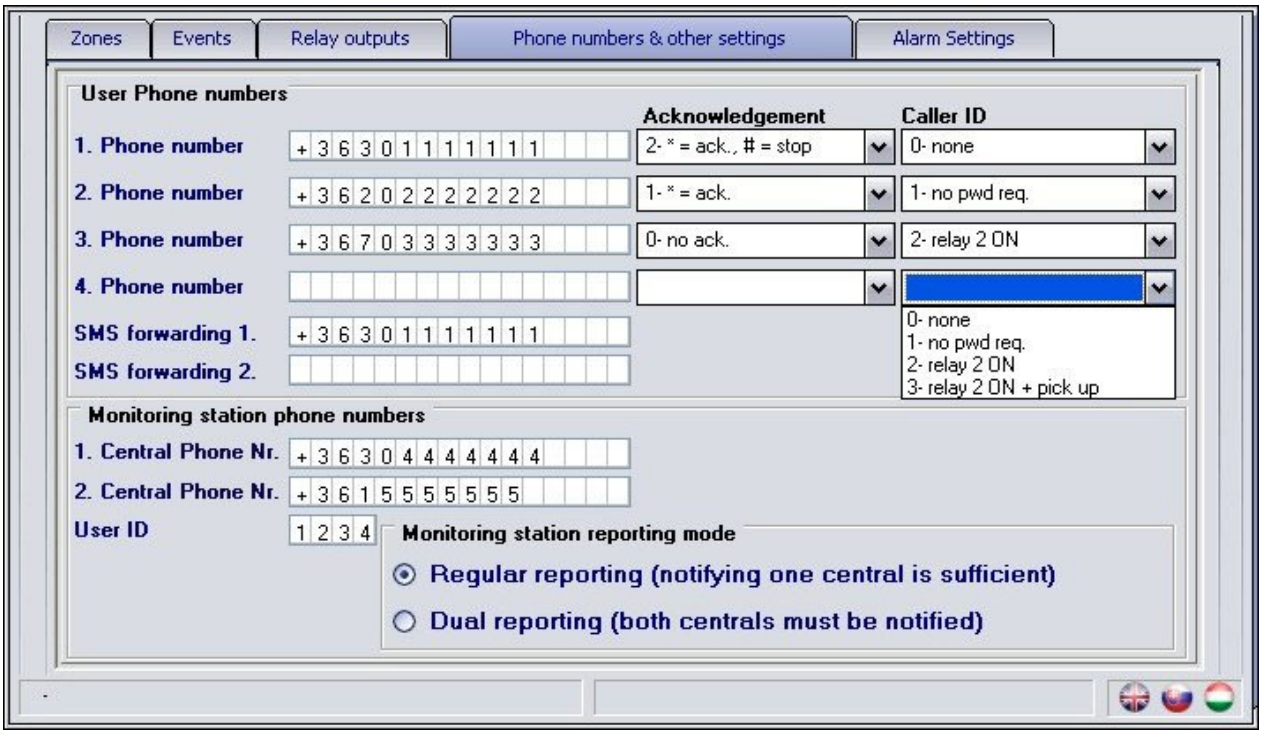
In the following rows all events are specified for which can be enabled to activate the desired relays on occurrence.

01. Z1 Alarm (alarm in zone 1)
02. Z1 Restore (restoration of alarm in zone 1)
…
08. Z4 Restore (restoration of alarm in zone 4)
09. Arm (arming)
10. Disarm (disarming)
11. Test report (sending test report message)
12. Battery Low (low battery voltage)
13. Battery OK (low battery voltage restored**)**

It can be set for each relay (**RELAY1** and **RELAY2**), how long to remain activated after activation by an event or a phone call (**Max. ON time** 0-254 seconds). If value **255** is set, the given relay will operate in bistable mode, which means if it has been activated, it will not deactivate itself, can only be deactivated through phone call (if enabled) or will deactivate on disarm if "**Turn off Relay(1,2) on Disarm**" is set (this function does not operate in "**Always Armed**" mode). If value **0** is set, relays will never operate.
"**Beep on Arm/Disarm**" function: if set, activates Relay1 impulsely on Arm/Disarm, one impulse on Arm and two on Disarm. This function can be used to indicate arming and disarming by connecting e.g. a siren or a flashlight to this output.
Relay2 can be set to become activated on GSM network fault by setting "**Relay2 indicates GSM fault**" function. In this case Relay2 remains activated during the fault.

Attention! If the module is configured for "**Always Armed**" mode with the relay(s) set bistable and the "**Control through phone call**" function is disabled, in case of relay activation, it cannot be deactivated only through the programming software!

2.5.4 Phone number settings


Zones
Events
Relay outputs
Phone numbers & other settings
Alarm Settings
User Phone numbers
Acknowledgement
Caller ID
1. Phone number
+ 3 6 3 0 1 1 1 1 1 1 1
2- * = ack., # = stop
0- none
2. Phone number
+ 3 6 2 0 2 2 2 2 2 2 2
1- * = ack.
1- no pwd req.
3. Phone number
+ 3 6 7 0 3 3 3 3 3 3 3
0- no ack.
2- relay 2 ON
4. Phone number
SMS forwarding 1.
+ 3 6 3 0 1 1 1 1 1 1 1
SMS forwarding 2.
0- none
1- no pwd req.
2- relay 2 ON
3- relay 2 ON + pick up
Monitoring station phone numbers
1. Central Phone Nr.
+ 3 6 3 0 4 4 4 4 4 4 4
2. Central Phone Nr.
+ 3 6 1 5 5 5 5 5 5 5
User ID
1 2 3 4
Monitoring station reporting mode
Regular reporting (notifying one central is sufficient)
Dual reporting (both centrals must be notified)

- **1 - 4. Phone number**: 4 user telephone numbers can be entered where alarms will be reported through voice call and/or SMS message (according to event settings).
- **Acknowledgement**: three confirmation modes can be selected:
  - **0 - no ack.**: event confirmation is not necessary
  - **1 - * = ack.**: event must be confirmed by pressing * key on the phone
  - **2 - * = ack, # = stop**: event must be confirmed by pressing ***** key on the phone, or the reporting of the given event to further phone numbers can be cancelled by pressing **#** key on the phone.
    (Reporting of all pending events waiting to be reported can be canceled by entering ****module password***# on the phone e.g. *1111# for default passw.).**
- **Caller ID**: there are four modes of caller identification for incoming calls:
  - **0 - None**: password is requested before accepting commands
  - **1 - No pwd req.**: commands are accepted without requesting the password
  - **2 - Relay2 ON**: identifies the caller, turns busy and activates Relay2 (free call)
  - **3 - Relay2 On + pick up**: identifies the caller, activates Relay2, then picks up to allow further controls through the phone
- **SMS forwarding 1-2**: the module forwards the SMS messages received on its SIM card to the telephone numbers entered here. This is useful e.g. to forward the information received from the GSM provider about the balance of prepay type SIM cards. (If these fields are blank, the module ignores incoming SMS messages).
  Important! Never enter here the phone number of the SIM card placed into the module, because this would initiate an infinite loop of SMS sent to itself right after the first incoming SMS, causing significant expense!
- **1-2. Central Phone Nr.**: enter here the phone numbers of the monitoring station(s)
- **User ID**: the four-digit (0..9,A,B,C,D,E,F characters) user identification number can be specified here, which is necessary for reporting to monitoring station.
- **Monitoring station reporting mode**: report and respectively request confirmation to/from only one of the phone numbers of monitoring station, or both phone numbers.

2.5.4.1 Setting phone numbers through SMS

The phone numbers can be set, replaced or erased also by sending an SMS to the module's SIM card from phone numbers configured in the module, containing the following commands:

Setting	SMS command	Specification	Module response
User phone numbers	∗**U**X=*phone number***#**	Substitute "X" with the ordinal number of the user phone number wished to be set or replaced (1,2,3 or 4)	USER PHONE NR. CHANGED.
Monitoring station phone numbers	∗**C**X=*phone number***#**	Substitute "X" with the ordinal number of the monitoring station phone number wished to be set or replaced (1 or 2)	CENTRAL PHONE NR. CHANGED.
Phone numbers for SMS forwarding	∗**S**X=*phone number***#**	Substitute "X" with the ordinal number of the SMS forwarding phone number wished to be set or replaced (1 or 2)	SMS FORWARD NR. CHANGED.
Erasing previously set phone numbers	∗**U**X**=#**	Substitute "X" with the ordinal number of the phone number wished to be erased (1-4 for users, 1-2 for others)	USER PHONE NR. CHANGED.
	∗**C**X**=#**		CENTRAL PHONE NR. CHANGED.
	∗**S**X**=#**		SMS FORWARD NR. CHANGED.

The commands are also accepted by the module from phone numbers which are not configured in the module, but in this case the module password is requested to be entered in the command after the parameters, in the following way:
e.g. ∗**U**X**=***phone number***, PWD=1111#** . The procedure is the same if the command is sent from a phone number which is set in the module, but for which "0 - None." option is assigned at Caller ID setting, because with this setting the given phone number is considered unauthorized to perform remote settings, therefore password is required.

Commands must always start with star "**∗**" and respectively end with hash "**#**" character. It is also possible to send more commands in one SMS, but the entire message mustn't exceed 160 characters. If the response SMS from the module would exceed 160 characters, only the first 160 characters are transferred. In case of making typing or command mistakes, the following response SMS will be received: "**SYNTAX ERROR!**" and the command(s) will not be executed.

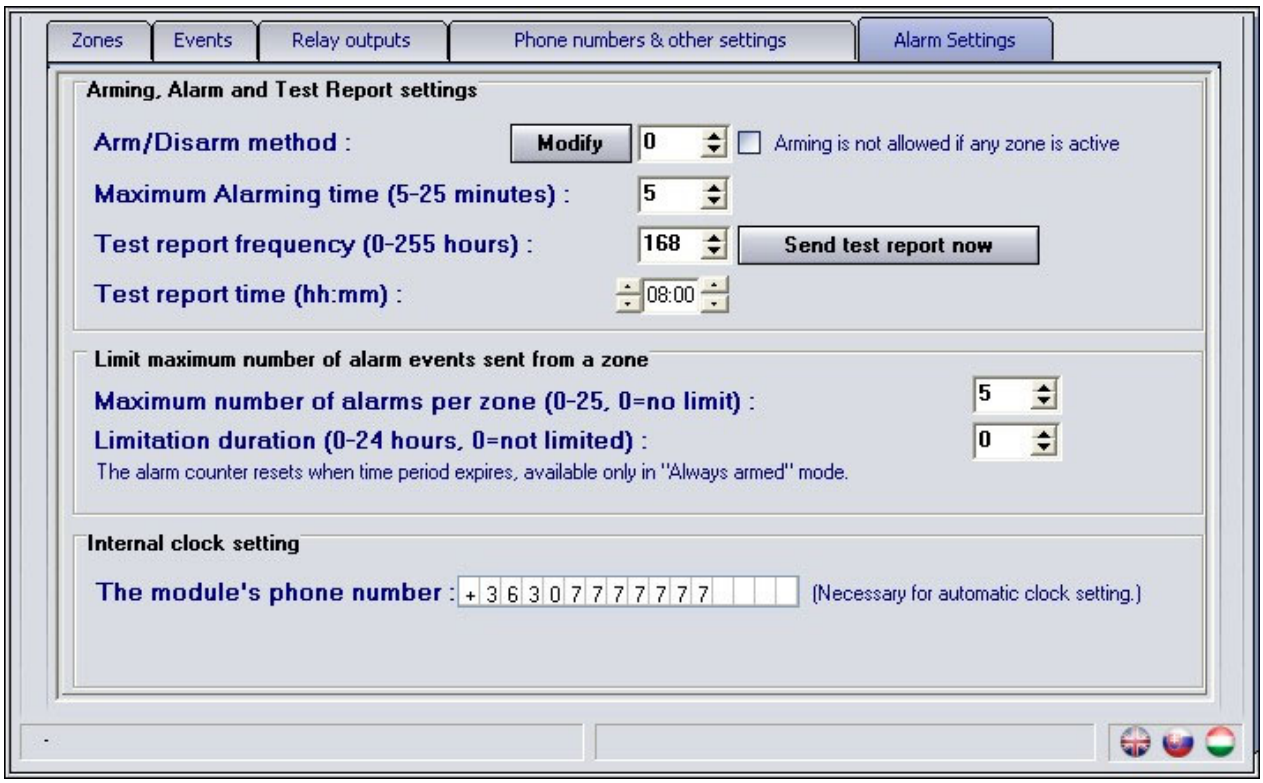
Example:

To set the first user phone number to be +36301234560, the first monitoring station phone number to be +36301234561 and the second SMS forwarding number to be +36301234562, type the following in the message:

∗U1=+36301234560#∗C1=+36301234561#∗S2=+36301234562#

To **erase** a previously set **phone number**, leave the "*phone number*" part blank (eg.: to erase the second user phone number, type: **∗U2=#**).

2.5.5 Alarm settings


Zones
Events
Relay outputs
Phone numbers & other settings
Alarm Settings
Arming, Alarm and Test Report settings
Arm/Disarm method :
Modify
0
Arming is not allowed if any zone is active
Maximum Alarming time (5-25 minutes) :
5
Test report frequency (0-255 hours) :
168
Send test report now
Test report time (hh:mm) :
08:00
Limit maximum number of alarm events sent from a zone
Maximum number of alarms per zone (0-25, 0=no limit) :
5
Limitation duration (0-24 hours, 0=not limited) :
0
The alarm counter resets when time period expires, available only in "Always armed" mode.
Internal clock setting
The module's phone number :
+ 3 6 3 0 7 7 7 7 7 7 7
(Necessary for automatic clock setting.)

- **Arm / Disarm method**: arming and disarming can be performed with external unit (access keypad, key switch, radio controller etc.), and through the phone. For arming/disarming with external unit one (Z4) or two (Z3 and Z4) inputs can be used depending on the available switching signal:
    - **0 - Always Armed**: it is not necessary to arm/disarm the module when used as transmitter device. In this case select this mode and this way all four inputs remain available for signal reception and the module will be armed permanently.
    - **1 - Using switch**: arming and disarming is performed with switch or relay contact, where one of the states of the switch (or compliant relay) arms, the other state disarms the module. Closed contact on input Z4 (to V-) arms, opening this contact disarms the module. In this case input Z4 cannot be used as zone input.
    - **2 - Using switch**: this mode corresponds to the previous, one but operates the system inversely (closed contact disarms, open contact arms the module).
    - **3 - One kind of impulse**: arms the system with a closed contact impulse on input Z4 (to V-) and performs disarm with the following closed contact impulse on the same input.
    - **4 - Two kinds of impulses**: select this mode when arming and disarming have to be performed by closed contact impulses on two different inputs. Such is e.g. an RC module receiver where one relay is activated for a short time when pressing the arming button and a second relay is activated when pressing the disarming button. Closed contact impulse applied on input Z3 (to V-) arms, also closed contact impulse applied to input Z4 (to V-) disarms the system. In this mode inputs Z3 and Z4 cannot be used for zone function according to the meaning.
    - **5 - Two kind of impulses**: corresponds to the previous mode, but arming and disarming is performed by impulsive opening of the closed contacts on inputs Z3 and Z4 (to V-).

Attention! In modes 0, 1 and 2 arming and disarming through phone is not available.

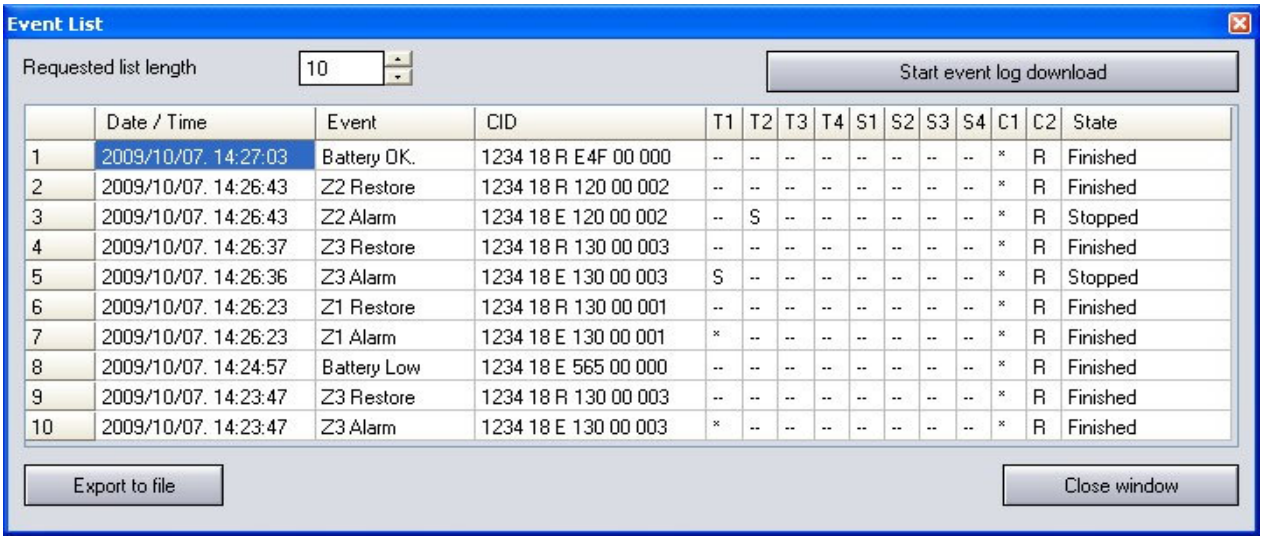
- **Arming is not allowed if any zone is active**: if enabled, the module cannot be armed if any of the zones is activated.
- **Maximum Alarming time**: can be adjusted between 5 and 25 minutes, means how long should the module make attempts to report an event through GSM. When this time expires and there are still calls or SMS to be performed for the given event, the module will cancel the alarm process and will not make any more attempts of reporting this specific event. This only refers to this specific event, calls and SMS messages initiated by other new events will continue to be reported.
- **Maximum number of alarms per zone**: it can be set between 0 and 25, how many alarms to be accepted from one zone. This makes possible to avoid a faulty zone to occur alarms continuously. Disarming and rearming the system re-enables the zone, then alarms are accepted again, but only the maximum number of alarms, according to the setting. In case of setting value **0**, alarms are not limited.
- **Limitation duration**: it can be adjusted between 0 and 24 hours, how long the module should ignore alarms of the specific zone which has reached the limitation value entered at "**Maximum number of alarms per zone**" option. When this period of time expires, the alarm counter is reset automatically and the zone becomes monitored again. This limitation option is only available in „**Always armed**" mode.
- **Test report frequency**: the frequency of test report messages can be set in hours (0-255). This means the module will send test reports in the intervals set here. If value **0** is entered, the module does not send test reports.
- **Test report time**: here the time of test reports can be specified in hh:mm format or on the left of the field the hours and on the right the minutes can be adjusted using the arrows. The module takes this time into consideration on the first day of every month, which means at this time of the first day of every month it sends a test report, then the followings are sent again in the intervals set at frequency, and so on. On the first day of the following month it will send a test report again at the given time of day.
- **Send test report now**: sends a test report immediately when pressed
- **Internal clock setting**: the phone number of the SIM card placed into the module should be entered here. It is necessary for automatic clock adjustment in networks where time stamp is not available. When using SIM cards of such GSM service providers, internal clock can only be adjusted by the module by sending an SMS to itself, and the actual time is taken and set from the received SMS.
  The module does not control summer time shifting, therefore basically adjusts its clock automatically only each 20th day, or on restart after power loss.
  There is possibility to set the module's internal clock manually with an SMS. For this, the following message has to be sent to the module's phone number: **#dt**

2.6 Changing the module's password

To change the access password of the module, press the lock button and fill in the fields according to the meaning, then press **OK**.
If the old password is forgotten, then it is necessary to reset the module settings in order to reset the password as well. Module reset can be performed via SMS, that is described in the "***Remote control and status query through SMS***" chapter on page 15.

2.7 Event log

After the connection to the module is established successfully, the event list can be downloaded after pressing the **"Long Eventlist>>>"** button:



	Date / Time	Event	CID	T1	T2	T3	T4	S1	S2	S3	S4	C1	C2	State
1	2009/10/07. 14:27:03	Battery OK.	1234 18 R E4F 00 000	--	--	--	--	--	--	--	--	*	R	Finished
2	2009/10/07. 14:26:43	Z2 Restore	1234 18 R 120 00 002	--	--	--	--	--	--	--	--	*	R	Finished
3	2009/10/07. 14:26:43	Z2 Alarm	1234 18 E 120 00 002	--	S	--	--	--	--	--	--	*	R	Stopped
4	2009/10/07. 14:26:37	Z3 Restore	1234 18 R 130 00 003	--	--	--	--	--	--	--	--	*	R	Finished
5	2009/10/07. 14:26:36	Z3 Alarm	1234 18 E 130 00 003	S	--	--	--	--	--	--	--	*	R	Stopped
6	2009/10/07. 14:26:23	Z1 Restore	1234 18 R 130 00 001	--	--	--	--	--	--	--	--	*	R	Finished
7	2009/10/07. 14:26:23	Z1 Alarm	1234 18 E 130 00 001	*	--	--	--	--	--	--	--	*	R	Finished
8	2009/10/07. 14:24:57	Battery Low	1234 18 E 565 00 000	--	--	--	--	--	--	--	--	*	R	Finished
9	2009/10/07. 14:23:47	Z3 Restore	1234 18 R 130 00 003	--	--	--	--	--	--	--	--	*	R	Finished
10	2009/10/07. 14:23:47	Z3 Alarm	1234 18 E 130 00 003	*	--	--	--	--	--	--	--	*	R	Finished

- **Requested list length**: length of event list, this number of latest events will be displayed
- **Start event log download**: initiates the downloading process
- **Columns of the event list**:
  - **Date / Time**: date and time of the event
  - **Event**: event specification
  - **CID**: Contact-ID code of the event
  - **T1-T4**: reports to user phone numbers
  - **S1-S4**: SMS messages to user phone numbers
  - **C1-C2**: reports to monitoring station
  - **State**: event status (Processing, Delayed, Stopped, Finished, Timeout)

  Marks displayed in T1-T4, S1-S4 and C1-C2 columns:
  - **?** - report processing in progress
  - ***** - reporting successful
  - **R** - reporting already performed in other way, therefore reporting is not needed
  - **!** - reporting failed
  - **S** - alarm has been cancelled, therefore reporting is not necessary
  - **T** - reporting timeout

  By keeping the mouse pointer above any cell of the table, details of the specific event will be displayed. If you wish to copy this content, hold down CTRL button on keyboard and the details will remain displayed therefore the content can be selected and copied as usual.

- **Export to file:** by pressing this button event log can be saved in the following three formats:
  - **Excel**: Microsoft Excel format
  - **CSV**: text file, columns separated by comma
  - **TXT**: text file, columns separated by tabulator
- **Close window:** press to close event list window

2.8 Reading the module's version

Right after the connection is established successfully, the firmware version of the connected module is automatically displayed in the upper right corner of the main window.

From the example the following details can be read:

- Type of the module: GSM-Pager3
- Firmware version: v2.12
- Firmware issue date: 11.11.2009

2.9 Remote control and status query through phone

The module can be controlled and status query can be performed after calling the number of the SIM card placed in the module. When on-line, the following commands are available using the phone's keys:

Command	Specification	Module response
∗**9***password***#**	Entering module password	Password accepted: 3 beeps Password denied: 4 low-tone beeps
∗**0#**	Disarm	3 beeps
∗**1#**	Arm	6 beeps
∗**2#**	Armed status query	Disarmed: 3 beeps Armed: 6 beeps
∗**4#**	GSM signal strength query	Number of beeps according to the actual GSM signal strength
∗**3***RS***#**	Control relay outputs *R*: relay number: **1** or **2** *S*: relay state: **0** = open, **1** = closed	Becomes open: 3 beeps Becomes closed: 6 beeps
∗**3***R***9#**	Relay output state query *R*: relay number: **1** or **2**	Open: 3 beeps Closed: 6 beeps
∗**800***M***#**	Listen to voice messages *M*: voice message number: **1-8**	Playing voice message
∗**890***M***#**	Record voice messages *M*: voice message number: **1-8**	Long beep, then recording for 8 seconds, then long beep again

Example:

1. **Caller identification:** case of **0 – no identification,** and **password: 1111** :
   a. **Activation of Relay1:**
      - Enter password: ∗**91111#** (accepted: 3 beeps)
      - Activation of Relay1: ∗**311#** (Relay1 closed: 6 beeps)
   b. **State query of Relay2:**
      - Enter password: ∗**91111#** (accepted: 3 beeps)
      - State query of Relay2: ∗**329#** (Relay2 closed: 6 beeps)
   c. **Voice message recording to place no. 3. :**
      - Enter password: ∗**91111#** (accepted: 3 beeps)
      - Record message: ∗**8903#** (long beep) recording (long beep)
2. **Caller identification:** case of **1- no password requested** :
   a. **Deactivation of Relay2:** (3 beeps: password ok) ∗**320#** (Relay2 open: 3 beeps)

2.10 Remote control and status query through SMS

The module provides possibility to perform controls and status query by sending the following SMS commands to the module:

SMS Command	Specification
∗**R1=ON, PWD=**yyyy**, CRQ#**	Activation of Relay1 (bistable mode) If needed, substitute “yyyy” with the module password, see specifications below
∗**R2=ON, PWD=**yyyy**, CRQ#**	Activation of Relay2 (bistable mode) If needed, substitute “yyyy” with the module password, see specifications below
∗**R1=OFF, PWD=**yyyy**, CRQ#**	Deactivation of Relay1 If needed, substitute “yyyy” with the module password, see specifications below
∗**R2=OFF, PWD=**yyyy**, CRQ#**	Deactivation of Relay2 If needed, substitute “yyyy” with the module password, see specifications below
∗**R1=ON**x**, PWD=**yyyy**, CRQ#**	Activation of Relay1 for “x” (1-254) seconds (monostable mode) Substitute parameter “x” with the desired value If needed, substitute “yyyy” with the module password, see specifications below
∗**R2=ON**x**, PWD=**yyyy**, CRQ#**	Activation of Relay2 for “x” (1-254) seconds (monostable mode) Substitute parameter “x” with the desired value If needed, substitute “yyyy” with the module password, see specifications below
∗**STATUS REQ, PWD=**yyyy**#**	Request module status (sends input states, armed/disarmed status and relay states, module clock date/time, GSM signal strength, and supply voltage level in response SMS) If needed, substitute “yyyy” with the module password, see specification below
∗**RESET, PWD=**yyyy**, CRQ#**	Module reset (restores all settings to factory default) If needed, substitute “yyyy” with the module password, see specification below

yyyy = module password (default: 1111, optional parameter, to be used only from phone numbers which are not set in the module, or from those which are set, but for which "0 - None." option is assigned at Caller ID setting – these phone numbers are considered unauthorized, therefore password is necessary). If the module password is not entered in the command SMS sent from unauthorized phone numbers, the control task will not be executed by the module.

CRQ = request confirmation in response SMS (optional parameter, to be used if confirmation is requested). If this parameter is used in the control SMS, the module will send back confirmation in SMS to the sender about execution of the command.

Commands must always start with star "**∗**" and respectively end with hash "**#**" character. It is also possible to send more commands in one SMS, but the entire message mustn't exceed 160 characters. If the response SMS from the module would exceed 160 characters, only the first 160 characters are transferred. In case of making typing or command mistakes, the following response SMS will be received: "**SYNTAX ERROR!**" and the command(s) will not be executed.

SMS responses from the module (when using CRQ parameter):

Relay1 activated: 54 sec.	= Relay1 activated for 54 seconds
Relay2 activated: Permanent.	= Relay2 activated permanently (bistable mode)
Relay2 deactivated.	= Relay2 deactivated
Unauthorized User!	= Wrong or missing password
Module reset executed.	= Module settings are restored to factory default

Examples for SMS command usage:

To activate Relay1 permanently (bistable mode):

- If the command is sent from a phone number which is set in the module with other than "0 - None" Caller ID option, and no confirmation is requested, then the command is: **∗R1=ON#**
- If the command is sent from a phone number which is set in the module with "0 - None" Caller ID option, then module password is also requested, therefore the command is: **∗R1=ON, PWD=1111#** (if module password is 1111)
- If the command is sent from a phone number which is not set in the module and confirmation is requested, then the command is: **∗R1=ON, PWD=1111, CRQ#**

Example for module status information sent by the module in SMS:

Attention! The status information refers to the states and values measured in the moment when the module sends the SMS!

Info:	
IN1=NC, Ready	(shows the input setting NO/NC and the current state
IN2=NC, Alarm	Alarm/Ready = activated/deactivated)
IN3=NO, Ready	…
IN4=NO, Ready	…
Armed	(shows the Armed/Disarmed status)
R1=ON, 37 sec	(shows the state of the relay, the time left till deactivation,
R2=ON Permanent	or "Permanent" if the relay is activated permanently)
Time: 03.11.2009 14:18	(shows the module's date and time setting)
GSM: 23	(shows the module's GSM signal strength)
Voltage=12.7 V	(shows the supply voltage of the module)

2.11 Supply voltage monitoring

The module is equipped with supply voltage monitoring function. Low voltage event is generated if the supply voltage falls for at least 60 seconds below 11,8V (or 23,6V). Low voltage restoration event is generated if the supply voltage increases again above 11,8V (or 23,6V) for at least 60 seconds. If the supply voltage is permanently low, under the mentioned level, low voltage event is generated once per 24 hours.

3 External elements and functions

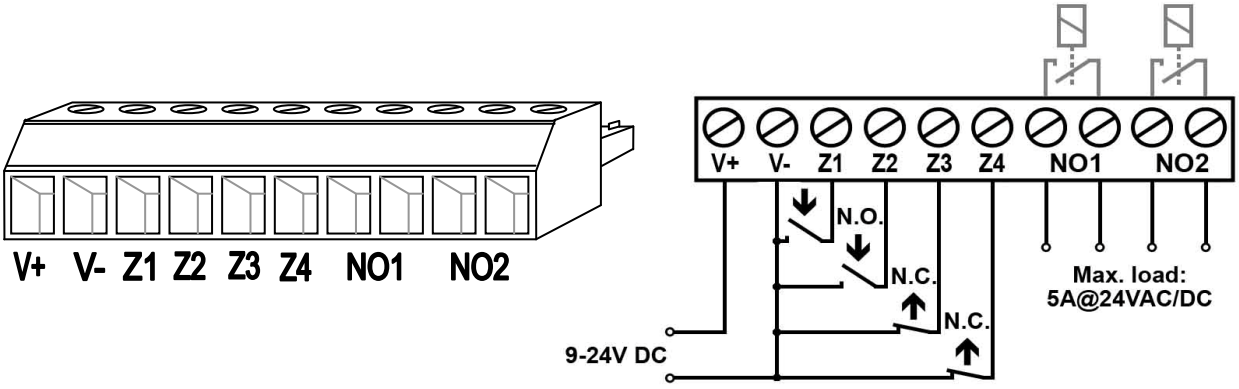
3.1 SIM card case

The cover can be opened by pulling horizontally towards the LED display on its marked end. Insert the SIM card here and replace the cover.

3.2 LED signals

Red is continuously lit	GSM network is not available or phone restart/power up in progress
Red and green blink slowly and alternately	The downloaded data is faulty
Red blinks fast Green blinks slower	Event transmission in progress
Green blinks impulsely and slowly, Red is not lit	GSM network is available, system is disarmed
Green and red blink impulsely and alternately	GSM network is available, system is armed

3.3 Wiring



V+ Supply voltage 9-24 VDC
V- Supply voltage negative polarity (GND)
Z1 1. contact input (negative: to V-)
Z2 2. contact input (negative: to V-)
Z3 3. contact input (negative: to V-)
Z4 4. contact input (negative: to V-)
NO1 1. relay output (normally open contact)
NO2 2. relay output (normally open contact)

Important: if the GSM Pager3 is mounted in a metal housing which is connected to protective ground, then connect the V- terminal of the module to the same ground point!

4 Installation guide

4.1 Mounting

- Test the GSM signal strength with your mobile phone. It may happen that the signal strength is not sufficient in the desired mounting place. In this case the planned installation place can be changed before mounting the device.
- Do not mount the unit in places where it can be affected by strong electromagnetic disturbances (e.g. in the vicinity of electric motors, etc.).
- Do not mount the unit in wet places or places with high degree of humidity.
- If the module will be installed in a metal housing, drill a hole on the metal housing for the FME connector. Choose the drill size appropriate for the FME base part. Fix the FME base with the enclosed screw nuts into the housing. Ensure that the FME base and the metal housing has galvanic connection.
- In case of using a plastic housing, the module can be entirely placed inside.
- Connecting the GSM antenna: the antenna can be connected to the FME-M connector. The antenna supplied with the module provides good transmission under normal reception circumstances. In case of occasionally occurring signal strength problems or/and wave interference (fading), use another (directed) type of antenna or find a more suitable place for the module.

4.2 Putting into operation

- Disable PIN code request and voicemail on the SIM card placed into the module.
- **Enable caller identification and caller ID sending services on the SIM card at the GSM service provider** (a few types of SIM cards do not have these services enabled by default).
- Check the SIM card to be placed into its case properly.
- Check the antenna to be fixed properly to the GSM Pager3.
- Check the wiring to be done according to the wiring instructions.
- The device can be powered up. If the module is used as an auxiliary transmission device besides an alarm control panel, then make sure that power supply is sufficient at the load of both the control panel and the Pager. The quiescent current of the module is 100mA, however it can reach up to 500mA during communication.

Attention! The module restarts automatically once each 24hour and at each power up, therefore it is recommended to choose the power source with special attention. The module attempts to adjust its internal clock at each power up and on each 20th day by requesting the exact time from the GSM provider. If this is unsuccessful, it adjusts the clock by sending an SMS to itself. For this reason the phone number of the SIM card placed into the module must be entered correctly in "The module's phone number" field.

5 Technical details

5.1 Technical specification

Supply voltage:	9-24 VDC
Nominal current consumption:	100mA
Maximum current consumption:	500mA @ 12VDC, 250mA @ 24VDC
Operating temperature:	-20ºC - +70ºC
Transmission frequency:	GSM 900/1800 MHz, 850/1900 MHz
Max. relay output load:	5A @ 24VAC/DC
GSM phone type:	Simcom SIM340
Dimensions:	84 x 72 x 32mm
Weight:	200g (packed: 300g)

5.2 Contents of the package

- GSM Pager 3 + terminal connector
- GSM 900/1800 MHz antenna
- User manual, warranty card, CD
- USB A-B cable

5.3 The manufacturer's contact

T.E.L.L. Software Hungária Kft
4034 Debrecen, Vágóhíd u. 2.
Hungary
Tel.: +36-52-530-130
Fax.: +36-52-530-131
Web: www.tell.hu